

## PATENT

Atty Docket No. 1113-011/MMM

In the claims:

The application claims are indicated below.

1. (Previously presented) A solid-state camera device having a pixel matrix with a plurality of photoelectric pixels arranged in a plurality of rows and columns, and a vertical scanning circuit that selects a row of the plurality of rows of photoelectric pixels, and a horizontal scanning circuit that selects a column of the plurality of columns of photoelectric pixels, and wherein an image signal is read by selecting at least one photoelectric pixel by the vertical scanning circuit and horizontal scanning circuit and transferring a charge from the at least one selected photoelectric pixel, the improvement comprising:

a vertical group scanning circuit and a vertical selector circuit included in the vertical scanning circuit, the vertical group scanning circuit selecting successive row groups that each includes a plurality of rows, the vertical selector circuit selecting at least one desired row within each successive row group selected by the vertical group scanning circuit to provide a row pixel set, the successive row groups extending substantially completely across the pixel matrix in a vertical direction; and

a horizontal group scanning circuit and a horizontal selector circuit included in the horizontal scanning circuit, the horizontal group scanning circuit selecting successive column groups that each includes a plurality of columns, the horizontal selector circuit selecting at least one desired column within each successive column group selected by the horizontal group scanning circuit to provide a column pixel set, the successive column groups extending substantially completely across the pixel matrix in a horizontal direction.

2. (Previously presented) The solid-state camera device of claim 1 wherein the horizontal selector circuit includes memory that stores each column pixel set and the vertical selector circuit includes memory that stores each row pixel set, and wherein the horizontal scanning circuit reads the stored column pixel sets sequentially by horizontal reading intervals and the vertical scanning circuit reads the stored row pixel sets sequentially by vertical reading intervals.

## PATENT

Atty Docket No. 1113-011/MMM

## 3. (Cancelled)

4. (Previously presented) The solid-state camera device of claim 1 wherein the photoelectric pixels of the pixel matrix are arranged in a first sequence of color, and the vertical scanning circuit and horizontal scanning circuit read a non-contiguous reduced image set from the pixels in a sequence of color that is substantially identical to the first sequence of color.

5. (Previously presented) The solid-state camera device of claim 1 wherein the horizontal selector circuit has a power cutoff function that interrupts power to the columns not selected by the horizontal selector circuit and the vertical selector circuit has a power cutoff function that interrupts power to the rows not selected by the vertical selector circuit.

6. (Previously presented) The solid-state camera device of claim 1 wherein the vertical group scanning circuit and the horizontal group scanning circuit are each comprised of shift registers that can be preset globally so as to select simultaneously a plurality of spaced-apart row groups and a plurality of spaced-apart column groups, respectively.

7. (Original) A method of determining a maximum luminance of a plurality of pixels in a first column of photoelectric pixels of the solid-state camera of claim 6, comprising the steps of simultaneously reading a plurality of rows.

8. (Previously amended) A method of summing image signals from a plurality of photoelectric pixels of a first row of photoelectric pixels of the solid-state camera of claim 1, comprising the steps of reading a plurality of columns simultaneously.

9. (Original) The solid-state camera device of claim 1 wherein the photoelectric pixels that are read can be reset.

10. (Previously presented) A solid-state camera device having a plurality of photoelectric pixels arranged in a matrix along rows and columns and a reading scanning circuit that selects and reads photoelectric pixels, the improvement comprising:

## PATENT

Atty Docket No. 1113-011/MMM

means for reading a reduced pixel set comprising plural spaced-apart horizontal rows of pixels and plural spaced-apart vertical columns of pixels, the horizontal rows being arranged substantially completely across the matrix in a vertical direction and the vertical columns being arranged substantially completely across the matrix in a horizontal direction.

11. (Previously presented) A solid-state camera device having a color pixel matrix including a plurality of photoelectric pixels of different colors arranged in a first sequence of colors along rows and columns, the improvement comprising,

a reading scanning circuit that reads pixels by selecting a reduced pixel set of the photoelectric pixels in the color pixel matrix, the reduced pixel set including at least omitted rows of pixels or omitted columns of pixels and having a color sequence that is substantially similar to the first sequence of colors.

12. (Previously presented) The solid-state camera element of claim 11, wherein the reduced pixel set includes omitted rows of pixels and omitted columns of pixels.

13. (Previously presented) An electronic camera, comprising:

a camera lens that receives image light from a photographic object;  
a display;

a solid-state camera device having a plurality of photoelectric conversion pixels arranged in a matrix of rows and columns so that light received by the camera lens is incident on the matrix, and a scanning circuit that can read full image information from the photoelectric pixels by sequentially selecting all photoelectric pixels, and can read a reduced set of image information from the photoelectric pixels by selecting spaced-apart rows of the matrix with omitted rows between them and spaced-apart columns of the matrix with omitted columns between them; and

## PATENT

Atty Docket No. 1113-011/MMM

a controller can control the camera device to obtain and record full image information of the entire plurality of photoelectric pixels and can control the solid-state camera device to display the reduced set of image information.

14. (Previously presented) An electronic camera, comprising:

a camera lens that receives image light from a photographic object;

a solid-state camera device having a plurality of photoelectric conversion pixels arranged in a matrix of rows and columns so that light received by the camera lens is incident on the matrix, and a scanning circuit that reads image information from the photoelectric pixels by a first sequence of selecting each photoelectric pixels and by a second sequence of selecting spaced-apart rows of the matrix with omitted rows between them and spaced-apart columns of the matrix with omitted columns between them, thereby reducing the number of photoelectric pixels that are read;

an exposure control receives image information and sets exposure conditions of the solid-state camera device; and

a controller that controls the solid-state camera device such that the scanning circuit selects photoelectric pixels by the first sequence when the image information is recorded and selects photoelectric pixels by the second sequence when providing image information to the exposure control.